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Mylodon. It has less lime and more silica. In their other chemical constituents they are without any great difference. Of lime the bone of the Mylodon has 30.48%, while that of man has but 25.88%. Of silica the Mylodon has 3.71%, while man has 22.59%. I am well aware of the ordinary uncertainty of this test when applied to specimens from different localities and subjected to different conditions; but in the present case no such differences exist. The bones were all encased in the same stratum of blue clay, and were subjected practically to the same conditions and surroundings. As one swallow does not make a summer so the discovery of one specimen does not prove the antiquity of man; but it is to be remarked that upon each discovery and in almost every investigation the evidence found points towards higher antiquity of man and tends to show the occupation of the earth by prehistoric man to be more and more extensive. This discovery is simply a fact to be put down to the credit of the high antiquity of man. We should proceed in the same direction to discover other evidences, to investigate the value of those already found; and as they accumulate, each one or all together should be given their fair value, in the endeavor to arrive at a truthful conclusion independent of *a priori* theory or preconceived idea.

MICROSCOPY.[1]

Methods of Decalcification. Continued.—*V. von Ebener's Hydrochloric Acid and Sodium Chloride Method.*[2]—To avoid the swelling caused by hydrochloric acid the author gives the following formula:

Hydrochloric acid	2.5	parts.
Alcohol	500.	"
Sodium chloride	2.5	"
Distilled water	100.	"

The fixed and hardened tissue is placed in this solution, which is daily strengthened by the addition of a small quantity of acid; when decalcified the preparations are washed in a half saturated aqueous solution of sodium chloride; when the solution shows an acid reaction it is neutralized by the addition of ammonia; this is repeated until the acid is entirely removed.

[1] Edited by C. O. Whitman, Clark University, Worcester, Mass.

[2] Wien. Sitzungsber., 1875, Zeit. f. wiss. Mikros., Bd. viii, p. 6, 1891.

Waldeyer's Hydrochloric Acid and Palladium Chloride Method.[1]—Small pieces of fixed and hardened tissue are decalcified in a solution consisting of:

Hydrochloric acid....................................	10. parts.
Palladium chloride.....	1. "
Distilled water..	1000. "

If not softened at the end of 24 hours the solution should be renewed; when decalcified the objects are washed in 70% alcohol until the acid is removed.

Bone Cells.—*Chiarugi's Method.*[2]—Small pieces of fresh bone are decalcified in picro-nitric acid prepared by adding 2 c.c. nitric acid to 100 c.c. saturated aqueous solution of picric acid; this solution is then diluted with two volumes of distilled water; when decalcified the tissue is washed in alcohol of increasing strengths. The sections are stained for a few minutes in a 1% eosine solution and decolorized in a 3% solution of potassium hydrate. The ground substance becomes colorless, while the bone cells and their processes are deeply stained. To fix the eosine the sections are washed and mounted in a 1% alum solution.

Fibres of Sharpey.—*Kölliker's Method.*[3]—The decalcified tissue is treated with concentrated acetic acid until transparent, when it is transferred to a saturated solution of indigo-carmine for a minute and then washed in distilled water; mount in glycerine or Canada balsam. The fibres of Sharpey are red, the remaining bone substance blue. Lithium carmine and safranin also differentiate the fibres.

Another method[4] employed is to heat the section in a crucible. The calcified fibres are shown with remarkable clearness.

Bone Medulla.—*Bizzozero's Method.*[5]—The author, after trying many methods, finds the following most useful in studying the elements of the medulla. The fresh tissue obtained by splitting the bone is fixed in Flemming's fluid, or still better, in a saturated solution of mercuric chloride in a 1% salt solution. After 2–3 hours the object is transferred to a mixture of the 1% salt solution and 90% alcohol, where it remains for 48 hours. It is then hardened in alcohol. The best results were obtained by staining the sections in hæmatoxylin or an aqueous solution of safranin and decolorizing with picric acid-alcohol. The amount of picric acid added to the alcohol is a matter of experiment. The proportions must be such that the protoplasm of the leucocytes remains uncolored when the nuclei of the red blood corpuscles are yellow. Müller's fluid fixes the red blood corpuscles better than sublimate. The sections are stained for a minute in a few c.c.'s of water to which have been added several drops of Ehrlich-Biondi's solution, then passed through the grades of alcohol, cleared in clove oil and mounted. The eosinophilous granules of the leucocytes are red or rose; the erythroblasts and blood corpuscles dark orange-red.

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[1] Arch. f. mikro. Anat., Bd. xi, 1875; Stricker's Manual of Histology, 1872, p. 1052.

[2] Bollet. della Soc. trai cult. della Scienza Med. Siena. fasc. viii, 1886; Zeit. f. wiss. Mikros., Bd. iv, p. 490, 1888.

[3] Zeit. f. wiss. Zool., Bd. xliv, p. 644, 1886.

[4] Zeit. f. wiss. Mikros., Bd. iv, p. 87, 1888.

[5] Atti della R. Acad. della scienze di Torino, vol. xxv, p. 156; Arch. f. mikro. Anat., Bd. xxxv, p. 424, 1890; Zeit. f. wiss. Mikros., Bd. vii, p. 513, 1890.

Löwit's Method.[1]—In the study of leucoblasts and erythroblasts Löwit employs the following method: Small pieces of bone medulla are fixed in a 1%–2% solution of platinum chloride in which they remain from 12–48 hours, then washed in running water for 24 hours, run through the grades of alcohol and imbedded in paraffine. The sections are stained for 2–4 minutes in an alcoholic solution of safranin, thoroughly washed in alcohol and treated with iodine-picric acid, which is prepared as follows: To a watch glass of 1% alcoholic solution of picric acid a drop or two of officinal iodine tincture is added. The sections remain in this solution for 10–30 seconds, when they are washed in alcohol, cleared in clove oil and mounted. Connective tissue and leucoblasts are yellow, erythroblasts red. If the sections are left too long in the iodine-picric acid or the solution is too strong all the elements appear a brownish-red. A little experience will soon enable one to obtain the desired results.

Demarbaix's Method.[2]—In studying the division and degeneration of the giant cells of the marrow employs the following method: The tissue is fixed for 24 hours in a mixture of

1% Chromic acid	14 parts.
Glacial acetic acid	1 part.
Distilled water	18 parts.

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[1] Arch. f. mikro. Anat., Bd. xxxviii, p. 533, 1891.

[2] La Cellule T. v, p. 27, 1889; Zeit. f. wiss. Mikros., Bd. vii, p. 73. 1890.

It is then washed for 24 hours in water, passed through the grades of alcohol and imbedded in paraffine. The sections are stained with safranin according to the method of Babes,[1] viz.: To a 2% aqueous solution of aniline oil is added an excess of safranin. Stain in a thermostat at 50° C., decolorize for an instant in acid alcohol, mount in balsam.

SCIENTIFIC NEWS.

Recent Deaths.—Dr. Andrew Crombie Ramsay, the geologist, Dec. 9, 1891, at the age of 76 years. He was largely self-taught and was appointed Professor of Geology in University College, London, in 1848. In 1851 he was chosen to the same chair in the newly formed School of Mines. He was said to be without a superior as a lecturer. Dr. J. F. Williams, Professor of Mineralogy and Geology in Cornell University, was but 29 years old at the time of his death. He was a graduate of the Renssalaer Polytechnic Institute and received his doctor's degree from the University of Göttingen. Before going to Cornell he was connected with the Pratt Institute, at Brooklyn, and with the Arkansas Geological Survey. Baron Achille de Zigno, the well-known geologist, in Padua, January 18, 1892. Carl Freiherr von Camerlander, Praktikant in the Museum of the Geological Reichsanstalt, in Vienna, Jan. 17, 1892. J. W. Ewald, geologist, in Berlin, in December, 1891, aged 81. George Haggar, some forty years ago a collector of Lepidoptera, at Ore, England, Jan. 10, 1892, aged 75. Francis Archer, conchologist and entomologist, at Liverpool, March 1, 1892, aged 52.

Tufts College, at College Hill, Mass., has established a chair of biology, and Dr. J. S. Kingsley has been appointed to fill the position. Prof. J. P. Marshall retains the geology and mineralogy.

In a recent popular work on evolution is a "glossary" of scientific terms in which the following typographical error occurs: "Zoea, the larva of decayed (? decapod) crustaceans."

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[1] Zeit. f. wiss. Mikro., iv, p. 470, 1887.